



Book Reviews

MAKING A MINT. COMPARATIVE STUDIES IN LATE IRON AGE COIN MOULD, BY MARK LANDON

Archaeopress, Oxford. 2016. 199pp, 259 black & white figures and tables, ISBN 978-1-78491-408-0, pb, £34.00

Baked clay trays containing multiple rows of similarly-sized holes are not uncommon on later Iron Age settlements in Britain and many parts of continental Europe. Over the years, these 'pellet moulds' have attracted a fair amount of comment, primarily with regard to their perceived role in the minting of Iron Age coinage, but research has tended to focus on using scientific analysis to identify which metals were worked in them from any residues. Their morphology and manufacture has received much less attention, however, despite being no less relevant to understanding their function. One reason for this relative neglect was the small size and fragmentary nature of most assemblages, but the long-standing association with minting also played a part, leaving mould rather stranded on the wrong side of a disciplinary divide, divorced from studies of late Iron Age metalworking at large, and a second best to the objects that were supposedly produced with their aid.

For remedying this situation, we are indebted to Mark Landon and his chance discovery in 2006 of a large deposit of mould eroding out of the bank of the River Rib at Ford Bridge, in the heart of the late Iron Age complex at Braughing-Puckeridge in Hertfordshire. There had been finds of pellet mould from earlier excavations in the vicinity, but nothing to compare to the mass recovered from Ford Bridge (nearly 10 kg of mould, and 6 kg of pottery, animal bone and furnace debris). Faced with a need to record the mould for publication and the conspicuous lack of any existing protocol to use for this purpose, Landon decided that the only thing to do was to devise his own. Two years later, an even larger group of pellet mould that had been found in the area some years previously in uncertain circumstances came to light, bringing the combined total for Braughing-Puckeridge to over 40 kg, larger than at any other site in Europe. One thing led to another, and Landon embarked on a wider study of the British material, which is reported in the monograph reviewed here.

The scene having been set, Chapter 2 reviews the literature on pellet moulds. The focus is on Britain, but Landon's survey takes in the important paper by Tournaire *et al.* (1982) on finds from France, which has informed much subsequent deliberation on the topic on both sides of the Channel. The chapter concludes by summarizing the key findings of an unpublished analytical study carried out by Henrietta Longden (2008) on the Ford Bridge material. These trays were used to make bronze pellets and the vitrification pattern indicates that heat was applied to the tray tops rather than from below. The next chapter sets out the approach and methodology for classifying mould devised by Landon. Qualitative and quantitative data were collected on a range of attributes designed to test questions posed in the existing literature; the attributes included the number, dimension and profiles of holes; fragment thickness and dimensions; edge profile; 'position type' (e.g. edge, middle, corner); and burning. A list of database abbreviations for all the features noted by Landon in recording an estimated 25% of known pellet mould stretches to almost two and a half pages in two-column format. Not all his recording codes proved fit for purpose and some have been revised for future use, e.g. the burn category. On the other hand, a conscious policy of 'over recording' had its upside, allowing him to pursue questions that only arose during the study. The position data, for example, revealed that major assemblages contain markedly fewer edge or corner pieces than expected, suggestive of preferential removal.

The core of the monograph comprises in-depth studies of the two large Braughing-Puckeridge assemblages, along with the smaller Henderson and Wickham Kennels collections and four isolated finds from the complex (Chapters 4–8). These are followed by studies of mould from a rural site at Turners Hall Farm, also in Hertfordshire but nearer St Albans (itself a well-known findspot for pellet mould), and important late Iron Age complexes at Bagendon in Gloucestershire and Old Sleaford in Lincolnshire (Chapters 9–11). Only a sub-sample of the much larger Old Sleaford assemblage was examined at first hand, but nevertheless provided useful additional information to the original publication (Elsdon 1997). In other circumstances, the bias to Braughing-Puckeridge would have limited the scope of his conclusions, but in the event, Landon was able to examine new finds from development-led excavations at Leicester and Scotch Corner (to be published in full elsewhere), which provide a wider perspective to his research.

The results are brought together in a wide-ranging final chapter, in which Landon briefly reviews some of the problems he encountered with his recording protocol and the limited archaeological evidence for context, before embarking on a measured assessment of how the research has advanced our understanding of mould manufacture and use. Quantification remains a major issue. The clear under-representation of edges and corners militates against using these to estimate MNI, added to which, at least three types of pellet mould were in use, each with different capacities and difficult to distinguish from fragments – a quadrilateral form with 25 holes (the Puckeridge type), pentagonal trays with 50 holes (the Verulamium form) and a large quadrilateral form with 100 holes (only known for certain at Scotch Corner, but perhaps present at Leicester and Sleaford). There are fragments of possible circular trays from Scotton in Lincolnshire, but a supposed hexagonal mould from Sheepen is more likely to be the result of misinterpreting pedimental fragments from a Verulamium-type tray. Both circular and rectangular tray forms are known in continental Europe. For comparative purposes, mould assemblages are probably best quantified by weight, which has rarely been recorded in the past.

The research provided various fresh insights into the manufacture of moulds. Marks on the bases suggest that the drying of trays was speeded up by laying them on grass or a similar substrate. Landon makes a good case for their manufacture in autumn, presumably after harvest, based on the presence of grass seed-stems and grain casts in several moulds. No new petrographic analysis to investigate the sources of clay was undertaken for this project, but inclusions and temper are rarer than one might have expected. In Hertfordshire, chalk wash was applied to mould holes, which would not only have encouraged molten metal to coalesce into lenticular pellets but also assisted in maintaining the reducing conditions that were vital for successfully casting copper-alloys, preventing the metal from fusing with the mould which it would do if allowed to oxidise. This practice has not been definitely observed in other regions, which might be because they had no base metal coinages and casting silver-rich alloys does not run the same risk.

On the Continent, multi-prong dibbers or peg-boards were occasionally used to make the holes in mould trays, but in Britain – apart from a possible example from Scotch Corner – the holes seem to have been made individually. This may seem counter-intuitive to our eyes, but as Landon shows, there are good practical reasons for making holes one at a time, and there may also have been some symbolic dimension to the process of tray-making. Indeed, some pieces of mould were evidently perceived as 'special' at the end of their lives: apart from the missing edges and corners, average fragment size implies that many pieces in the smaller assemblages were deliberately selected, and there are also signs that people went to the trouble of interring individual mould fragments in pits or ditches. Equally, whilst some large groups of mould were apparently deposited on the surface or in a midden (as at Ford Bridge and Puckeridge), we should not overlook the fact that in many non-industrial societies middens are perceived as possessing symbolic and regenerative properties.

There can be little doubt that these trays were designed for forming pellets of silver, bronze and presumably also gold, as both metal analyses and the occasional discovery of actual pellets trapped in mould fragments demonstrate.

What, then, can we conclude about the question begged in the monograph's title? Were the manufacturers of mould actually 'making a mint'? Were these trays used exclusively or primarily in coin production, or did they serve other purposes too – or instead? In my view, it is impossible to offer any definitive answers on the currently available evidence. Landon, whilst leaning towards the established interpretation, shows himself aware of the problems – although it is worth noting that one other interesting outcome of his work has undermined previous attempts to equate hole size with specific coin denominations, by showing that the modules of pellets produced in the trays cannot be determined with any confidence on the basis of hole dimensions or volume.

Matters have been thrown into even greater confusion by the discovery of a large quantity (1300 fragments) of pellet mould in excavations at Scotch Corner in North Yorkshire (Fell 2017), not far from the late Iron Age centre at Stanwick, but in an area where few Iron Age coins are found and none are known to have been struck. The moulds came from an early Roman context, which is also true of the other large recent discoveries at Leicester, Ford Bridge and – judging from the associated pottery –Puckeridge. Whilst this could indicate use of redundant trays for other metalworking purposes after the Roman invasion, a change in function seems a little contrived (they do not appear to have been used for producing copies of official Roman issues). These post-conquest finds also draw attention to how few – if any – finds of pellet mould in Britain actually come from secure Iron Age contexts. Added to this, two new surveys of the continental evidence emphasise how rarely Iron Age coin dies and punches occur at the same sites as mould debris (Lauwers 2015; Gruel *et al.* 2017), which also applies to Britain. Whilst this can be explained in various ways – it may well be anachronistic to assume that all stages of coin production took place at the same location (a point on which Landon agrees), or dies could have been subject to different rules of disposal – these cumulative tensions underline why we need to keep an open mind on the uses of pellet moulds, in the absence of more concrete indications.

The volume concludes with two appendices, the first detailing the outcome of four series of experiments in mould making undertaken as part of the study, the second listing known find sites of pellet mould in Britain. The monograph as a whole is nicely presented and generously illustrated – although a map of the Braughing-Puckeridge complex for readers who are not familiar with the site would not have come amiss. The overall structure and dealing with each assemblage in turn has led to some repetition, and some technical sections are a little dense for a non-specialist, but these are minor blemishes, and I found few errors. A longer summary, with French and German translations would help ensure that the volume reaches the continental audience that it deserves, but in this day and age, this is possibly more effectively addressed on the publisher's website.

In sum, this is an outstanding study, which has put the discussion of pellet moulds on a firm footing, and is surely destined to guide research on this topic well into the future. Landon deserves our thanks and admiration for the manner in which he grasped the nettle with his original Ford Bridge discovery, and then saw the more challenging project of recording and analysing a large body of material through to completion.

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Colin Haselgrove

University of Leicester

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